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RECORDED

N° 12,518



A.D. 1899

Kefir
bulbs

Date of Application, 15th June, 1899

Complete Specification Left, 14th Mar., 1900—Accepted, 12th May, 1900

PROVISIONAL SPECIFICATION.

Improvements relating to the Manufacture of Bread, Biscuits, and the like.

I, SAMUEL PROSKAUER, of Königin Augusta Strasse 50, Berlin, W. Germany, Chemist, do hereby declare the nature of this invention to be as follows:—

The purpose of the present invention is to

- a. Produce of an improved kind of bread or finer baked goods for dietetic purposes.
- 5 b. Augment the nutritiousness of the same.
- c. Improve the taste of the same and
- d. To avoid the use of leaven or the like and to produce finished goods within 2-3 hours.

This new baking process is executed in the following manner:

- 10 Kefir bulbs are first cleaned in water, then treated for 1-2 days with milk. This milk is not used in the following baking process. After this treatment the kefir bulbs are capable of changing good natural milk into powerful kefir milk, which is done in the known manner by adding good natural milk to the kefir bulbs and putting them aside for a sufficient time in a constant temperature of 20-25° C.
- 15 shaking the mixture from time to time. In order to obtain with this fermenting thickly appearing milk finished baked goods within 2-3 hours, the duration of this fermenting process must be at least 36-48 hours. The so obtained milk is then filtered through a cloth to separate it from the kefir bulbs, and with the addition of a small quantity of yeast it is used for making the dough.

- 20 For baking dietetic biscuits cakes and other finer goods of this kind wheaten flour is used, for baking dietetic bread there is used preferably a mixture of one part of rye and two parts of wheaten flour.

The nutritious value of such goods is augmented on the one hand by the previous addition of milk, on the other hand by the augmentation of the nitrogenous substances and phosphoric acid which they contain.

- 25 By the exclusive use of the kefir bulbs for the fermentation of the natural milk the milk albumen is formed into a very easily assimilated product which can be easily digested thus adding greatly to the digestible quality of the goods.

- 30 Chemical examination of the goods produced in the above described manner, have shown on an average:

				In biscuits.		In bread.	
Constituent parts of	albumen	...	...	11. 03 p.c.	...	9.031 p.c.	
"	"	" fat	...	8.129 p.c.	...	1. 16 p.c.	
"	"	" phosphoric acid	...	0.442 p.c.	...	0.356 p.c.	

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				In ordinary biscuits		Ordinary bread	
				after König.		after König.	
Albumen	...	...	...	8.55 p.c.	...	6.50 p.c.	
Fat	...	...	...	0.98 p.c.	...	0.45 p.c.	
Phosphoric acid	...	...	...	0.00 p.c.	...	0.00 p.c.	

[Price 8d.]

Proskauer's Improvements relating to the Manufacture of Bread, Biscuits, &c.

Experiments made with artificial gastric juice for distinguishing the proportion of digestible albuminous substances in the goods produced by the process of this invention has shown that 87 p.c. of the whole nitrogenous substances are digestible whereas the digestibleness of the whole nitrogen substance in ordinary goods made for comparison was found to be only 76 p.c.

These results show that these baked goods which introduce into the organism such relatively important quantities of hemialbumose and caseine in such fine distribution must be regarded as an important dietetic preparation. The lactic acid of the kefirized milk assisting the functions of the stomach in a suitable manner and the mushroom form remaining in the milk (*dispora caucasica*) possessing peptonising qualities the eating of such baked goods can be recommended in all circumstances of derangement resulting from or attendant by disturbances in nutrition such as: anæmia, emaciation, all gastric derangements, disturbances in the digestion, loss of strength, in diabetes, consumption also for convalescents and as food for children; in short in all cases where baked farinaceous food made with leaven can not be digested.

Dated this 15th day of June 1899.

HERBERT HADDAN & Co.,
Agents to Applicant.

COMPLETE SPECIFICATION.

Improvements relating to the Manufacture of Bread, Biscuits, and the like.

I, SAMUEL PROSKAUER, of Königin Augusta Strasse 50, Berlin, W. in the Empire of Germany, Chemist, do hereby declare the nature of this invention and in what manner the same is to be performed to be particularly described and ascertained in and by the following statement:—

The purpose of the present invention is to

- (a) Produce an improved kind of bread or finer baked goods for dietetic purposes.
- (b) Augment the nutritiousness of the same.
- (c) Improve the taste of the same.
- (d) To avoid the use of leaven or the like and to produce finished goods within 2-3 hours.

This new baking process is executed in the following manner

Kefir bulbs are first cleaned in water, then treated as hereinafter described for 1-2 days with milk. This milk is not used in the following baking process. The treatment of the kefir bulbs is as follows: Over 150 gr. of prepared kefir bulbs pour 5 ltrs. of boiled pure milk and leave it at a temperature of from 16°-20° for 1, 2 or at most 3 days in a tightly closed vessel, shaking the milk 5 or 6 times a day. Fermentation ensues, by which the milk is changed into kefir milk. Before using for baking, the milk is poured through a sieve or cloth so as to separate the preparation from the milk.

Production of bread. To bake for instance 8 loaves each with about 1½ lb. of dough (preferably one part rye and two parts wheaten flour), take 1 litre of the kefir-milk with about 80 gr. yeast, mix, and leave for about 2 hours, until ripe. Then add about another litre of kefir-milk and 30 gr. salt and make the dough. The dough must ferment for about 1 hour and then be kneaded. Then leave the dough for about 2 hours to complete fermentation to bake thoroughly.

Production of biscuits cakes, and other finer goods. Mix 2 lbs. wheaten flour, about ½ litre kefir milk and 50 gr. yeast, leave the mixture to ripen and then prepare

Proskauer's Improvements relating to the Manufacture of Bread, Biscuits, &c.

the dough with addition of 2 lbs. wheaten flour and $\frac{1}{2}$ litre of kefir milk. Further additions as in ordinary biscuit dough.

The nutritious value of such goods is augmented on the one hand by the previous addition of milk, on the other hand by the augmentation of the nitrogenous substances and phosphoric acid which they contain.

By the exclusive use of the kefir bulbs for the fermentation of the natural milk, the milk albumen is formed into a very easily assimilated product which can be easily digested thus adding greatly to the digestible quality of the goods.

Chemical examination of the goods produced in the above described manner, have shown on an average :

Constituent parts of albumen	In biscuits.	In bread.
...	11.03 p.c.	9.031 p.c.
" " fat	8.129 p.c.	1.16 p.c.
" " phosphoric acid	0.442 p.c.	0.356 p.c.

	In ordinary biscuits after König.	Ordinary bread after König.
Albumen	8.55 p.c.	6.50 p.c.
Fat	0.98 p.c.	0.45 p.c.
Phosphoric acid	0.00 p.c.	0.00 p.c.

Experiments made with artificial gastric juice for distinguishing the proportion of digestible albuminous substances in the goods produced by the process of this invention has shown that 87 p.c. of the whole nitrogenous substances are digestible whereas the digestibility of the whole nitrogenous substance in ordinary goods made for comparison was found to be only 76 p.c.

These results show that these baked goods which introduce into the organism such relatively important quantities of hemialbumose and caseine in such fine distribution must be regarded as an important dietetic preparation. The lactic acid of the kefirised milk assisting the functions of the stomach in a suitable manner and the mushroom form remaining in the milk (*discora caucasia*) possessing peptonising

qualities the eating of such baked goods can be recommended in all circumstances of derangement resulting from or attendant by disturbances in nutrition such as anæmia, emaciation, all gastric derangements, disturbances in the digestion, loss of strength, in diabetes, consumption, also for convalescents and as food for children : in short in all cases where baked farinaceous food made with leaven cannot be digested.

Having now particularly described and ascertained the nature of the said invention and in what manner the same is to be performed I declare that what I claim is :—

The process of producing baked goods in which natural milk, which has previously been fermented for from 36 to 48 hours with kefir bulbs is added to the meal from which the dough is made and finished baked goods suitable for dietetic purposes are obtained within from two to three hours.

Dated this 14th day of March 1900.

HERBERT HADDAN & Co.,
Agents to Applicant, 18, Buckingham Street, Strand, W.C. London.